Copper Nickel Alloy 6J40 Constantan Wire For Thermocouple Extension Compensating Wires

Our Product Introduction

Basic Information

- Place of Origin: China
- Brand Name: Victory
- Certification: ROHS,ISO 9001
- Model Number: constantan 6J40
- Minimum Order Quantity: 5
- Price: 20~35 $/kg
- Packaging Details: Wooden box/pallet, spool wire with carton box, coil with polybag
- Delivery Time: 5-21 days
- Payment Terms: L/C, T/T, Western Union, MoneyGram
- Supply Ability: 300 tons per month

Product Specification

- Product Name: Copper Nickel Alloy 6J40 Constantan Wire For Thermocouple Extension Compensating Wires
- Material: Cu/Ni
- Nickel: 45%
- Resistivity: 0.48+/-0.03
- Tensile Strength: 420 MPA
- Density: 8.9 G/cm3
- Condition: Hard / Soft
- Sureface: Bright
- Delivery Time: 7-20 Days
- Magnetic Properties: Non-Magnetic
- Melting Point: 1280°C
- Thermal Conductivity At 20°C: 23W/mK
- Coefficient Of Thermal: 13.5 X 10^6

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Product Description

Introduction:

Constantan wire is a type of resistance wire that is made from a copper-nickel alloy.
It has a relatively constant resistance over a wide range of temperatures, which makes it useful for applications such as heating elements, thermocouples, and strain gauges.
Constantan wire is known for its low temperature coefficient of resistance, which means its electrical resistance changes very little with temperature variations. This makes it suitable for precision measurement and control applications.

Application:

Heating Elements: Constantan wire is used in heating elements for applications such as electric furnaces, toasters, and industrial heating systems.

Thermocouples: It is used in the construction of thermocouples for temperature measurement in various industries, including automotive, aerospace, and manufacturing.

Strain Gauges: Constantan wire is utilized in the production of strain gauges for measuring mechanical strain in structures and materials.

Precision Resistors: Due to its stable resistance characteristics, constantan wire is used in precision resistors for electronic circuits and measurement instruments.

Temperature Sensors: It is employed in the manufacturing of temperature sensors for industrial and scientific purposes.

Electronic Components: Constantan wire is also used in various electronic components and sensors due to its stable electrical properties.

Advantage:

Stable Resistance: Constantan wire exhibits a relatively constant resistance over a wide temperature range, making it suitable for precision measurement and control applications.

Low Temperature Coefficient of Resistance: It has a low temperature coefficient of resistance, meaning its electrical resistance changes very little with temperature variations, providing consistent performance across different operating conditions.

Corrosion Resistance: Constantan wire has good resistance to corrosion, which makes it suitable for use in various environmental conditions.

Ductility and Workability: It is ductile and can be easily formed into various shapes, making it versatile for different applications and manufacturing processes.

Longevity: Constantan wire is known for its durability and longevity, providing reliable performance over extended periods of use.

Wide Range of Applications: It finds applications in diverse fields such as heating elements, thermocouples, strain gauges, precision resistors, and temperature sensors, showcasing its versatility.

Parameter:

Main Chemical composition (%)

Constantan	Copper	Nickel
Chemical	55%	45%

Physical Parameters:

Type	Resistivity (μΩ.m2 0°C)	Max working temperature (°C)	Tensile strength (Mpa)	Melting point (°C)	Density (g/cm)	EMF vs Cu uV/°C (0~100°C)	Elongation (%)
6J40	0.48+/-0.03	400	420	1280	8.9	45	>15%

Type of product:

Type	Size(mm)		others
Round wire	0.1~8mm		Customized
Flat ribbon wire	W-0.5~5mm	T-0.1~3mm	
Strip/foil	W-6~250mm	T-0.1~3mm	
Rod	8~200mm		

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